

IN THE CLAIMS

1. (currently amended) A method of communicating in a hierarchical cellular system having an inter-layer handoff system, said method comprising the steps of:

determining a timer value which is a function of the duration that a wireless unit operates within at least a cell of a first layer, said timer value being determined by the inter-layer handoff system; and

using said timer value in determining whether said wireless unit is to be handed off to at least a cell of a second layer.

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2. (original) The method of claim 1 wherein said step of determining comprises:

starting a timer as said wireless unit operates within a first cell of said first layer;

and

stopping said timer after a trigger is detected for handing off said wireless unit to a second cell of said first layer.

3. (original) The method of claim 1 wherein said step of determining comprises:

determining an amount of time said wireless unit is within a first cell of said first layer before being handed off to a second cell of said first layer.

4. (original) The method of claim 3 wherein said step of determining further comprises:

using said amount of time said wireless unit is within said first cell as said timer value.

5. (original) The method of claim 3 wherein said step of determining further comprises:

determining said timer value as a function of said amount of time said wireless unit is within said first cell.

6. (original) The method of claim 5 wherein said step of determining further comprises:

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32 determining said timer value as a function of amounts of time said wireless unit is within cells of said first layer.

7. (original) The method of claim 1 wherein said step of using comprises:
comparing said timer value to a first threshold; and
handing off said wireless unit to a second layer depending on said comparison.

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8. (original) The method of claim 1 wherein said step of using further comprises:
comparing said timer value to a first threshold; and
handing off to a layer of smaller cells if said timer value is greater than said threshold.

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9. (original) The method of claim 8 wherein said step of using further comprises:
comparing said timer value to a second threshold; and
handing off to a layer of larger cells if said timer value is less than said second threshold.

10. (original) The method of claim 9 wherein said step of using further comprises:
remaining in a current layer if said timer value is less than said first threshold and greater than said second threshold.

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32 11. (original) An inter-layer handoff system for communicating in a hierarchical cellular system, said system comprising:

processing circuitry configured to determine a timer value which is a function of the duration that a wireless unit operates within at least a cell of a first layer of said hierarchical cellular system and to use said timer value in determining whether said wireless unit is to be handed off to at least a cell of a second layer.

12. (original) The system of claim 11 wherein said processing circuitry is configured to start a timer as said wireless unit operates within a first cell of said first layer and to stop

said timer after a trigger is detected for handing off said wireless unit to a second cell of said first layer.

13. (original) The system of claim 11 wherein said processing circuitry is configured to determine an amount of time said wireless unit is within a first cell of said first layer before being handed off to at least a second cell of said first layer.

14. (original) The system of claim 13 wherein said processing circuitry configured to use said amount of time said wireless unit is within said first cell as said timer value.

15. (original) The system of claim 13 wherein said processing circuitry is configured to determine said timer value as a function of said amount of time said wireless unit is within said first cell.

16. (original) The system of claim 15 wherein said processing circuitry is configured to determine said timer value as a function of amounts of time said wireless unit is within cells of said first layer.

17. (original) The system of claim 11 wherein said processing circuitry is configured to compare said timer value to a first threshold and to handoff said wireless unit to a second layer depending on said comparison.

18. (original) The system of claim 11 wherein said processing circuitry is configured to compare said timer value to a first threshold and handoff to a layer of smaller cells if said timer value is greater than said first threshold.

19. (original) The system of claim 18 wherein said processing circuitry further configured to compare said timer value to a second threshold and handoff to a layer of larger cells if said timer value is less than said second threshold.

20. (currently amended) The system of claim 19 wherein said processing circuitry is further configured to remain in a current layer if said timer value is less than said first threshold and greater than said second threshold.

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